

# PSR-SPP- 24DC/URD3/4X1/2X2/T 2 - Extension module



2981729

<https://www.phoenixcontact.com/us/products/2981729>

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1-channel contact extension with TBUS interface, 4 N/O contacts, 1 N/C contact, 1 confirmation current path, 2 sec. dropout delay, Cat. 3, PL d in accordance with EN ISO 13849, width: 22.5 mm, plug-in Push-in terminal block

The figure shows a version with a screw connection

## Your advantages

- Up to Cat. 3/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508
- Each with 4 enabling, 1 signaling, and 1 confirmation current path, all with dropout delay
- 1-channel control

## Commercial data

Item number	2981729
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN01
Product key	DNA232
GTIN	4046356101882
Weight per piece (including packing)	232.2 g
Weight per piece (excluding packing)	204 g
Customs tariff number	85371099
Country of origin	DE

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## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Safety relays
Application	Extension module
Control	1-channel
Mechanical service life	approx. $10^7$ cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3

#### Insulation characteristics: Air clearances and creepage distances between the power circuits

Overvoltage category	III
Degree of pollution	2

### Electrical properties

Maximum power dissipation for nominal condition	2.02 W
Nominal operating mode	100% operating factor

#### Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / basic isolation (safe isolation, reinforced insulation and 6 kV between input circuit/N/C contacts and enabling current paths).

### Input data

#### General

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	84 mA
Typical response time	20 ms
Typical release time	2 s
Recovery time	1 s
Protective circuit	Surge protection; Suppressor diode Fuse; PTC resistor
Operating voltage display	Green LED
Status display	LED (green)

### Output data

Contact switching type	4 delayed enabling current paths 1 delayed signaling current path
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	1 delayed confirmation current path
Contact material	AgSnO <sub>2</sub>
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V AC/DC
Limiting continuous current	6 A (N/O contact)
	3 A (N/C contact)
Maximum inrush current	6 A (N/O contact)
	3 A (N/C contact)
Inrush current, minimum	25 mA
Sq. Total current	$50 \text{ A}^2 (I_{\text{TH}}^2 = I_1^2 + I_2^2 + I_3^2 + I_4^2)$
Interrupting rating (ohmic load) max.	114 W (24 V DC, $\tau = 0 \text{ ms}$ , N/C contact 65/66: 72 W)
	288 W (48 V DC, $\tau = 0 \text{ ms}$ )
	77 W (110 V DC, $\tau = 0 \text{ ms}$ )
	88 W (220 V DC, $\tau = 0 \text{ ms}$ )
	1500 VA (250 V AC, $\tau = 0 \text{ ms}$ , N/C contact 65/66: 750 VA)
Maximum interrupting rating (inductive load)	48 W (24 V DC, $\tau = 40 \text{ ms}$ )
	40 W (48 V DC, $\tau = 40 \text{ ms}$ )
	35 W (110 V DC, $\tau = 40 \text{ ms}$ )
	33 W (220 V DC, $\tau = 40 \text{ ms}$ )
Switching power min.	0.4 W
Switching capacity (360/h cycles)	6 A (24 V DC)
	5 A (230 V AC)
Switching capacity (3600/h cycles)	3 A (24 V (DC13))
	3 A (230 V (AC15))
Output fuse	10 A gL/gG NEOZED (N/O contact)
	4 A gL/gG NEOZED (N/C contact)

## Connection data

### Connection technology

pluggable	yes
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### Conductor connection

Connection method	Push-in connection
Conductor cross-section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

## Dimensions

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

## Material specifications

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Color	yellow
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## Characteristics

### Safety data

Stop category (EN 60204-1)	1
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### Safety data: EN ISO 13849

Performance level (PL)	d
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### Safety data: IEC 61508 - High demand

Safety Integrity Level (SIL)	2
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### Safety data: EN IEC 62061

Safety Integrity Level (SIL)	2
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP54 IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)

## Standards and regulations

### Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 50178/VDE 0160
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any

# PSR-SPP- 24DC/URD3/4X1/2X2/T 2 - Extension module

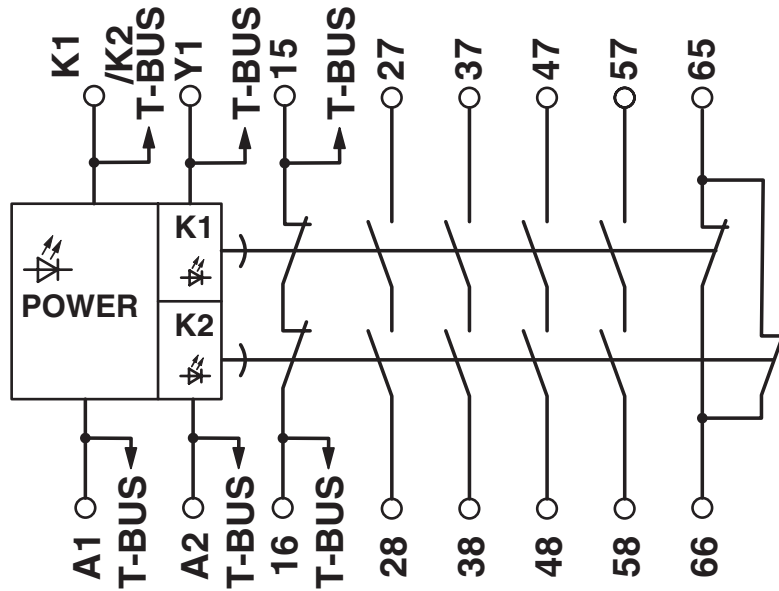


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## Drawings

Circuit diagram



Block diagram

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## Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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